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# Trade and Economic Growth

Development Policy  
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# Say's Law: Supply Creates its Own Demand

- Say's Law: Supply always equals demand
  - Because prices adjust, there is no such thing as a glut
  - More supply simply lowers prices until demand equals
- This may be true for many goods and services, but it is not true for labor and capital → derived demand
  - Demand for labor depends on the demand for the goods and services produced by labor
  - Capital is not invested if there is insufficient demand for the goods and services that it produces
  - Investment generates savings, not the other way round



Jean-Baptiste Say  
1767-1832



# Keynes and the Paradox of Thrift

“For although the amount of his own saving is unlikely to have any significant influence on his own income, the reactions of the amount of his consumption on the incomes of others makes it impossible for all individuals simultaneously to save any given sums. Every such attempt to save more by reducing consumption will so affect incomes that the attempt necessarily defeats itself.”

❖ The General Theory of Employment, Interest and Money, Chapter 23



John Maynard  
Keynes  
1883-1946



## Exports as an autonomous source of demand

- Remember  $GDP = C + I + G + (X - M)$
- Consumption demand is derived from labor earnings (when you hear someone tell you that consumption is driving growth, you should ask what is driving consumption? The answer is growth).
- Investment demand is derived from expectations about future profits (what drives expectations? Growth)
- Government demand depends (to a large extent) on taxation of consumption and earnings.
- Exports are autonomous in that their level does not depend on GDP growth or expectations about future GDP growth.

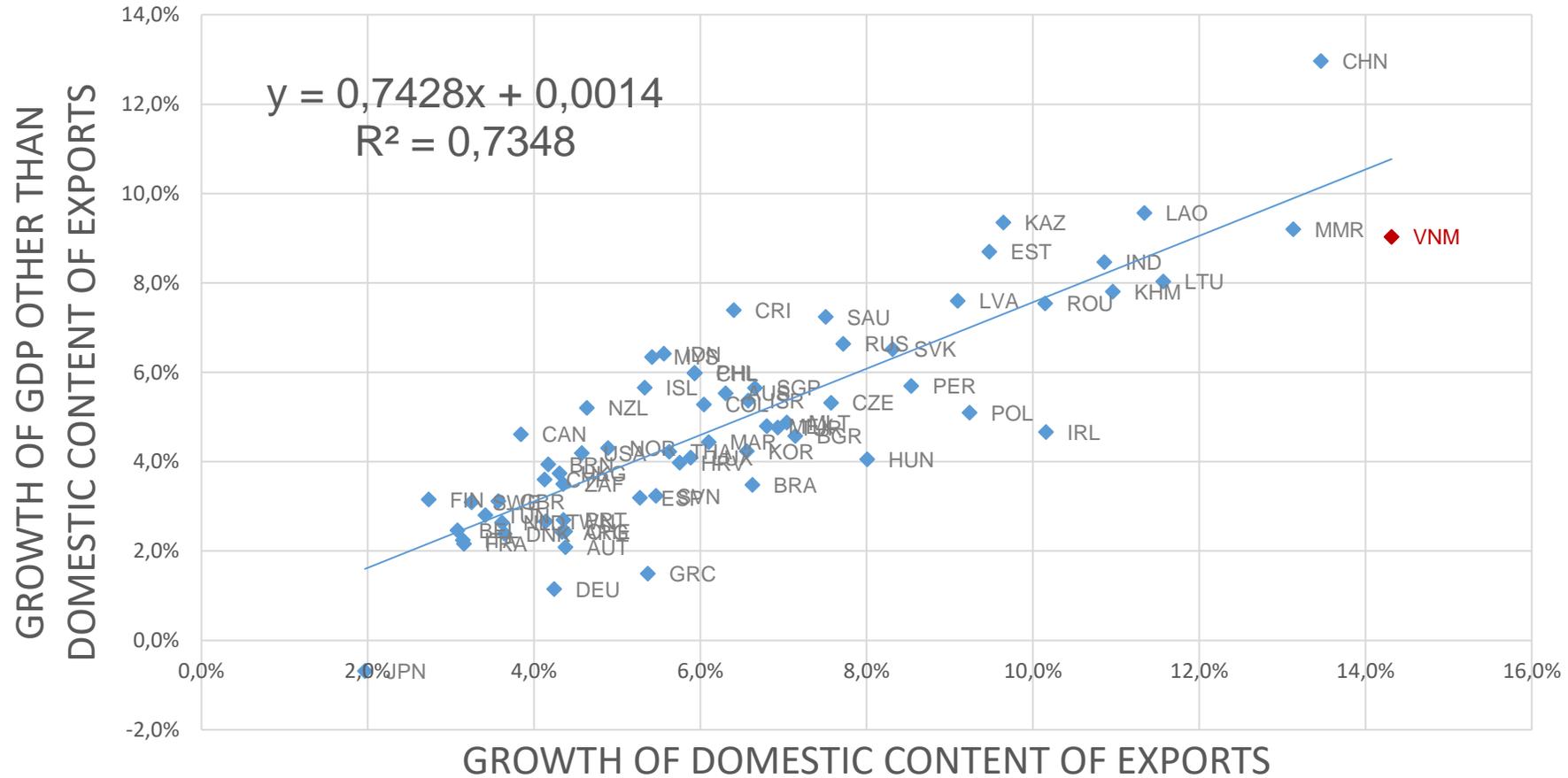


## Export-led growth: Under-employed labor and Idle capital

- Adam Smith’s “vent for surplus”: the division of labor and specialization require a large market (supply doesn’t equal demand)
  - Exports bring underutilized factors (labor) into production
  - The resulting “surplus” can be reinvested in industry
- Verdoorn’s Law: Productivity growth is a function of the rate of growth of manufactured output (again requires a large market)
- Thirlwall’s Law: Balance of payments constraint on growth
- Recent Asian history: Japan, Korea, Taiwan, China, Singapore, Malaysia Thailand and Vietnam all examples of export-led growth



# Growth of exports and growth of GDP, 2003-2019





# Competitiveness of Exports

- Export growth is a function of relative prices and growth of foreign incomes
- $f(\text{exports}) = \frac{\text{home prices}}{\text{foreign prices}}$ , *change in foreign income, elasticity of demand*
- As rates of change:  $x_t = \eta(p_{dt} - p_{ft}) + \varepsilon(z_t)$
- $p_{dt}$  are domestic prices and  $p_{ft}$  are foreign prices, all in the same currency
- $\eta$  is the elasticity of demand for exports (eta)  $[\Delta Q/\Delta P]$  (always negative), so if foreign prices are rising faster than domestic prices, export growth is positive
- $\varepsilon$  is the income elasticity of demand for foreign income (epsilon)  $[\Delta Q/\Delta Z]$  (always positive): so exports grow when foreigners get richer



## Changes in domestic prices

- Foreign income and foreign prices are exogenous to the model
- But domestic prices are a function of changes in domestic wages and productivity
  - So as domestic wages rise, domestic prices also rise
  - But as domestic productivity rises, domestic prices fall.
- Remember that domestic productivity in manufacturing rises more quickly as the pace of output growth increases: Kaldor's Second Law
- So good exporters (where output is growing rapidly) become more competitive over time



# The balance of payments

- BOP = Current account + Financial Account + Capital Account
  - Current account = net exports + net primary income (wages and investment income) + net secondary income (net transfers) + change in central bank reserves
  - Financial account = net FDI + net portfolio flows
  - Capital account = net purchase of fixed assets (land)
- BOP is an accounting identity, not an equilibrium model
  - When the current account is negative, the financial and/or capital account must be positive (or the central bank draws down on its reserves)
  - Price changes do not automatically bring the balance of payments into balance



# The balance of payments as a constraint on growth

- When the current account is in deficit, the country must:
  - reduce imports and/or
  - attract foreign direct investment or loans and/or
  - Draw down on foreign exchange reserves
- This can mean slowing down domestic demand growth by increasing domestic interest rates
- Why are high oil prices bad for developing countries (that do not produce oil)?
  - If the price of imports is rising faster than the price of exports, the country needs to either export more or finance the deficit with capital inflows
  - If neither is possible, interest rates will have to rise to attract foreign capital and slow down domestic demand

# Long run balance depends on achieving growth of exports equal to growth of imports



- Recall the export function :  $x = \eta(p_d - p_f) + \varepsilon(z)$
- Now add an import function:  $m_t = \psi(p_f - p_d) + \pi(y)$ ,
  - where  $\psi$  ( $\psi$ ) is price elasticity of demand for imports (always negative) and
  - $\pi$  ( $\pi$ ) is income elasticity of demand for imports
  - $y$  is domestic income growth
- Imports grow more rapidly when domestic prices are rising faster than import prices, and domestic incomes are increasing

# What are the levels of income (Y) that are consistent with imports equalling exports?

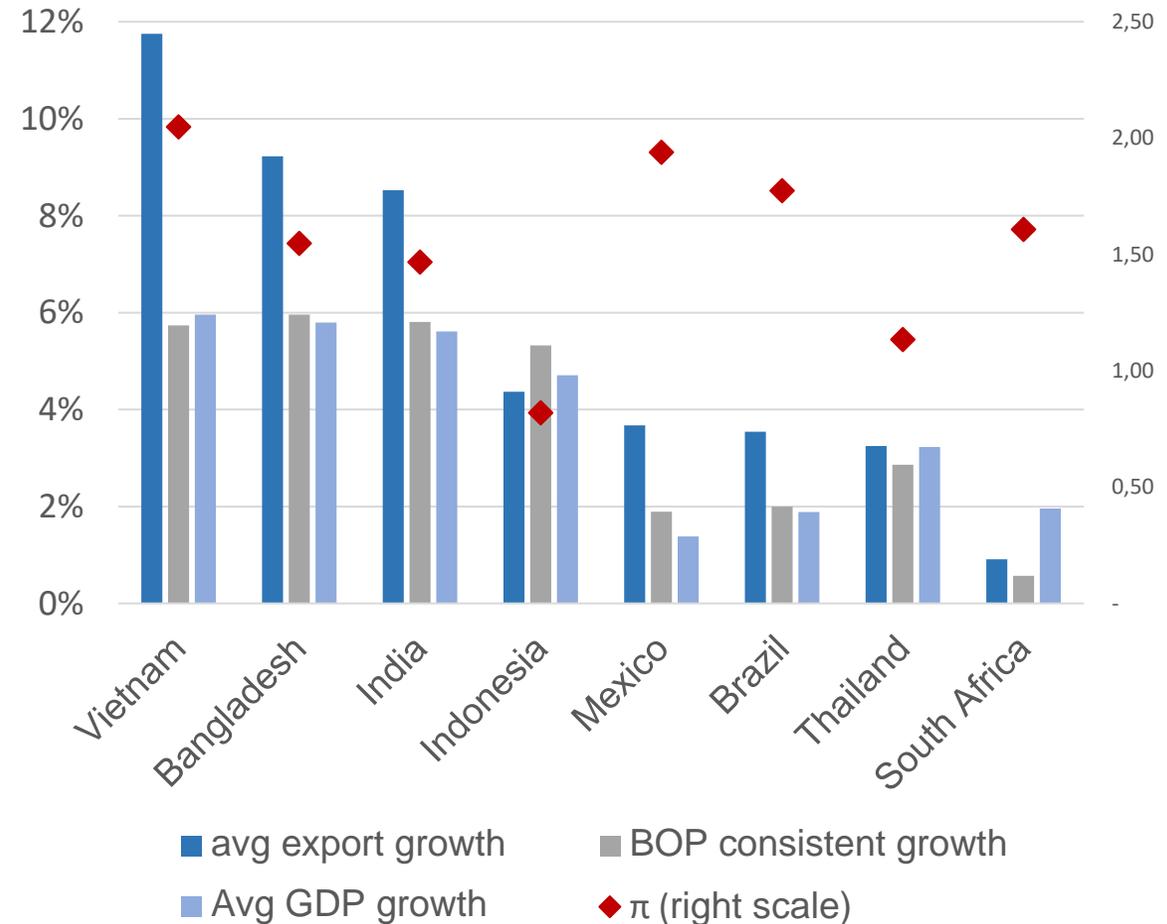


- If the prices of the goods a country imports are rising faster than the goods its exports, the BOP consistent growth rate will be slower (terms of trade effect)
- If the country's inflation rate is higher than its trading partners, the BOP consistent growth rate will be slower.
- If prices do not change, then the crucial factor is *ratio of income elasticity of demand for exports and the income elasticity of demand for imports*:
  - $y = \frac{\varepsilon(z)}{\pi}$  or  $x/\pi$  (Thirlwall's law)
  - In words: *the more import intensive growth is, the lower the rate of BOP consistent growth*



# Balance of payments consistent growth 2001-2020 in selected countries

- Vietnam had the highest export growth rate but also higher income elasticity of demand for imports
- Indonesia's export growth was slow but relatively low import elasticity
- Mexico and Brazil had slower export growth and higher import elasticity





## Policy implications

- Countries grow faster if they can sustain a higher rate of export growth
- Countries with a high income elasticity of demand for imports will achieve a lower balance of payments consistent rate of growth (Thirlwall's Law)
- Countries that produce goods that have a high income elasticity of demand will grow faster (manufactured goods vs. bulk commodities)
- Verdoorn's Law: labor productivity is a function of the rate of growth of manufactured output
- Remember we are talking about export growth (a policy outcome) not "trade liberalization" (a policy mechanism)



## Discussion questions

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1. Discuss the balance of payments constraint on growth and the implications for trade policy
2. How can countries achieve a high rate of export growth and lower income elasticity of demand for imports?